

We claim:

- 1 1. A method of data transmission comprising the steps of:
  - 2 dividing a data packet into a plurality of data sub-packets;
  - 3 transmitting a first control information associated with one of the plurality of
  - 4 data sub-packets over a time slot x of a control channel; and
  - 5 transmitting the associated one of the plurality of data sub-packets over a time
  - 6 slot y of a data channel.
- 1 2. The method of claim 1, wherein the first control information indicates a manner of
- 2 decoding the associated one of the plurality of data sub-packets.
- 1 3. The method of claim 1 comprising the additional step of:
  - 2 channel coding the data packet prior to the step of dividing the data packet into
  - 3 the plurality of data sub-packets.
- 1 4. The method of claim 1 comprising the additional step of:
  - 2 channel coding the associated one of the plurality data sub-packets prior to the
  - 3 step of transmitting the associated one of the plurality of data sub-packets.
- 1 5. The method of claim 1, wherein the time slot x of the control channel and the time slot y
- 2 of the data channel are time synchronized to each other.
- 1 6. The method of claim 1, wherein time slot x-z of the control channel and the time slot y of
- 2 the data channel are time synchronized to each other and z is an integer.
- 1 7. The method of claim 1, wherein the time slot x of the control channel and the time slot y
- 2 of the data channel are not time synchronized to each other and the control information
- 3 includes an indication of the associated one of the plurality of data sub-packets.
- 1 8. The method of claim 1 comprising the additional step of:
  - 2 transmitting a second control information associated with a second of the
  - 3 plurality of data sub-packets over a time slot x+1 of the control channel; and

transmitting the associated second of the plurality of data sub-packets over a time slot  $y+1$  of the data channel.

The method of claim 8, wherein the first and second control information are identical.

The method of claim 8, wherein the second control information indicates a manner of decoding the associated second of the plurality of data sub-packets.

The method of claim 1 comprising the additional step of:

transmitting the first control information over a time slot  $p$  of another control channel.

The method of claim 1, wherein the time slot x of the control channel and the time slot p of the other control channel are time synchronized to each other.

The method of claim 1, wherein the first control information includes a new/continuation flag to indicate whether the associated one of the plurality data sub-packets is a beginning of a new data packet transmission or a continuation of a data packet transmission in progress.

The method of claim 1, wherein the first control information includes a sequence identifier to indicate a sequence of the associated one of the plurality data sub-packets.

The method of claim 1, wherein the first control information includes a user identifier to indicate a user to whom the associated one of the plurality of data sub-packets is intended.

The method of claim 1, wherein the first control information is channel coded prior transmission.

The method of claim 1 comprising the additional step of:

transmitting user specific flags over a time slot  $q$  of a user identity channel to indicate one or more users to whom the associated one of the plurality of data sub-packets is intended.

1 18. The method of claim 1, wherein user specific flags associated with users to whom the  
2 one of the plurality of data sub-packets are intended are set to one and user specific flags  
3 associated with users to whom the one of the plurality of data sub-packets are not  
4 intended are set to zero.

1 19. The method of claim 1, wherein the user specific flags associated with users to whom the  
2 associated one of the plurality of data sub-packets are intended are turned on or set to  
3 one and transmitted when the associated one of the plurality of data sub-packets is a first  
4 data sub-packet or a last sub-packet of the data packet.

1 20. The method of claim 19, wherein the user specific flag is an in-phase signal when the  
2 associated one of the plurality of data sub-packets is the first data sub-packet and a  
3 quadrature signal when the associated one of the plurality of data sub-packets is the last  
4 sub-packet of the data packet.

1 21. The method of claim 1, wherein the control channel is power controlled.

1 22. The method of claim 21 comprising the additional step of:  
2 receiving control channel quality feedback from a receiver to which the data  
3 packet is intended.

1 23. A transmitter comprising of:  
2 means for dividing a data packet into a plurality of data sub-packets;  
3 means for transmitting a first control information associated with one of the  
4 plurality of data sub-packets over a time slot x of a control channel; and  
5 means for transmitting the associated one of the plurality of data sub-packets  
6 over a time slot y of a data channel.

1 24. The transmitter of claim 22 further comprising of:  
2 means for channel coding the data packet or the plurality of data sub-packets.

1 25. The transmitter of claim 22 further comprising of:  
2 means for transmitting a second control information associated with a second of  
3 the plurality of data sub-packets over a time slot x+1 of the control channel; and

means for transmitting the associated second of the plurality of data sub-packets over a time slot  $y+1$  of the data channel.

26. The transmitter of claim 25, wherein the first and second control information are identical.

1 27. The transmitter of claim 23 further comprising of:

means for transmitting a new/continuation flag in a time slot q of a new/continue channel to indicate whether the associated one of the plurality data sub-packets is a beginning of a new data packet transmission or a continuation of a data packet transmission in progress.

1 28. The transmitter of claim 23 further comprising of:

means for transmitting a sequence identifier in a time slot q of a communication channel parallel to the data or control channel to indicate a sequence of the associated one of the plurality data sub-packets.

1 29. The transmitter of claim 22 further comprising of:

means for channel coding the first control information.

1 30. The transmitter of claim 22 further comprising of:

means for transmitting user specific flags over a time slot  $q$  of a user identity channel to indicate one or more users to whom the associated one of the plurality of data sub-packets is intended.

1 31. The transmitter of claim 22, wherein the transmitter is a base station belonging to a  
2 wireless communication system.

1 32. The transmitter of claim 22 further comprising of:

2 means for adjusting a power of the means for transmitting the first control  
3 information over the control channel.

1 33. The transmitter of claim 32 further comprising of:

2 means for receiving control channel quality feedback.